

REMARKS

In an Office Action dated June 9, 2004, claims 29-34, 81-100, 121-140, 201-220 and 341-360 were rejected. By this amendment, claims 29- 30, 32-34, 81-83, 85-91, 94-95, 98-99, 121-123, 125-131, 134-135, 138-139, 201-203, 205-211, 214-215, 218-219, 341-343, 345-351, 354-355, and 358-359 have been amended. Claims 1-28, 35-80, 100-120, 140-200, 220-340 and 360-380 are canceled without prejudice to filing such or similar claims in one or more continuation or divisional applications. Claims 29-34, 81-99, 121-139, 201-219 and 341-359 remain pending. Applicants request reconsideration of the pending claims in view of the present amendment and following remarks. The non-elected claims are now canceled.

The specification has been amended to refer to the panels in Figures 6 and 24.

Support for the hypomethylation limitation added to claim 29 and the other transgenic plant claims may be found throughout the specification. By way of example, see paragraph 242 discussing hypomethylation of inserted DNA.

Elections/Restrictions

Applicants acknowledge that the restriction requirement has been made final.

Information Disclosure Statement

A replacement Supplemental Information Disclosure Statement with copies of the four references cited in the Information Disclosure Statement filed November 16, 2001, has been included with this response.

Specification

The Examiner has noted that Figures 6 and 24 contain multiple panels but the specification does not refer to the panels. The specification has been amended to refer to the labels in the figures. Further replacement Figures 6 and 24 have been submitted with this response, which include labels to the panels.

Claim Objections

The Examiner has objected to claims 87, 90, 127, 130, 207, 210, 347, and 350 under 37 CFR 1.75(c) for failing to limit the subject matter of a previous claim. The Examiner has asserted that, for example, since claim 82 does not encompass any seed, claim 87 is improperly dependent. However, the MPEP 608.01(n).III clearly states that a claim may be properly dependent where the dependent claim may not be practiced without the independent claim. The MPEP provides the example that a claim that covers the product of method where the method is claimed in an independent claim may properly depend from the independent claim since the method must be practiced to generate the product. In this case, the seed is produced from the plant of the independent claim. Clearly practice of the dependent claim requires practice of the independent claim. Thus, the dependent claims are properly dependent. Applicants respectfully request that the Examiner withdraw the objections to claims 87, 90, 127, 130, 207, 210, 347, and 350.

The Examiner has objected to claims 140, 220, and 360 under 37 CFR 1.75(c) for failing to limit the subject matter of a previous claim. Applicants have canceled claim 140, 220, and 360.

Claim Rejections – 35 USC § 112, second paragraph

The Examiner has rejected claim 29 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “at least a two to three-fold increase in expression” is not clear. Applicants respectfully disagree with the Examiner’s grounds for rejection. However, in order to facilitate prosecution in this case applicants have amended the pending claims, without prejudice or disclaimer, to recite “at least a two fold increase in expression.”

The Examiner has rejected claims 81 and 201 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “designated genotypically designated” is not clear. Applicants have amended the pending claims, without prejudice or disclaimer, to recite “genotypically designated.”

The Examiner has rejected claims 83, 85, 125, 205, and 345 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “genetical” is not clear. Applicants respectfully disagree with the Examiner’s grounds for rejection. However, in order to facilitate prosecution in this case applicants have removed the recitation “genetical” from claim 83 and amended claims 85, 125, 205 and 345, without prejudice or disclaimer, to recite “genotypic.”

The Examiner has rejected claims 86, 126, 206 and 346 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “essentially homogenous” is not clear. Applicants respectfully disagree with the Examiner’s grounds for rejection. However, in order to facilitate prosecution in this case applicants have amended the pending claims, without prejudice or disclaimer, to remove the recitation.

The Examiner has rejected claims 91, 131, 211 and 351 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “The tissue culture of regenerable cells” lacks antecedent basis. Applicants have amended the pending claims, without prejudice or disclaimer, to replace “The” with “A”.

The Examiner has rejected claims 91, 94, 131, 134, 211, 214, 351, and 354 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “capable of expressing” is not clear. Applicants respectfully disagree with the Examiner’s grounds for rejection. However, in order to facilitate prosecution in this case applicants have amended the pending claims, without prejudice or disclaimer, to replace the recitation with “having” or “has” as appropriate.

The Examiner has rejected claim 100 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner has asserted that the recitation “The hybrid corn plant” lacks antecedent basis. Applicants have canceled claim 100.

In light of the above comments, cancellation and amendments to the claims, the Applicants respectfully request that the Examiner withdraw the pending rejections to claims 29-34, 81, 83, 85, 86, 91, 94, 100, 125, 126, 131, 134, 201, 205, 206, 211, 214, 345, 346, 351, and 354 under 35 U.S.C. § 112, second paragraph.

Claim Rejections – 35 USC § 112, first paragraph, written description

The Examiner has rejected claim 29-34, 81-100 121-140, 201-220, and 341-360 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Regarding claims 29-34, the Applicants have met the written description requirement. The claims as currently drafted are to mutant plants, etc., wherein the plant comprises a hypomethylated transgene. The Examiner has asserted that the invention comprises any mutant corn plant, but that the specification only discusses four mutant plants with the claimed function of at least a two-fold increase in transgene expression. However, as amended, the claims include a clear structural limitation that relates to the functional limitation – namely the hypomethylated transgene. The hypomethylated transgene provides a clear structural limitation that would demonstrate to one of skill in the art that the inventors had possession of the invention as claimed. The limitation that the corn plant comprises one or more mutations has been removed. The recitation “mutant” remaining in the preamble is not intended as an express limitation intended to cover specific mutations. The recitation is simply to differentiate between naturally existing plants and novel plants of the claimed invention generated by the human intervention. In order to differentiate such plants, the claims recite that the plants have transgenes that are hypomethylated (a structural limitation) and the transgenes have a two-fold increase in expression (a functional limitation). The two-fold increase must be as compared to some other plant. In this case, the comparison is between a mutant plant (i.e., a plant with a novel change in its genome through any means such as selection for mutations, introduction of foreign DNA or induced mutation) and a non-mutant plant (i.e., the same plant without such novel change in its genome).

Regarding claims 34, the Examiner has asserted that the specification does not make any mention of the *Mop1-2* mutation having the ability to cause an increase in transgene expression. The applicants respectfully disagree. Claim 34 as originally drafted included *Mop1-2* and since the

original claims are a part of the specification, the specification clearly indicated that the *Mop1-2* mutation has the ability to cause an increase in transgene expression. However, in order to facilitate prosecution in this case applicants have amended the pending claims, without prejudice or disclaimer, to replace the recitation with "*Mop1-2*" with "*Mop1-1*."

Regarding claims 81-100 121-140, 201-220, and 341-360, the Examiner has indicated that deposition of the claimed mutant seed in compliance with the deposition requirements of 37 CFR 1.801-1.809 would meet the written description requirement. The Examiner has asserted that in order to comply with 37 CFR 1.801-1.809, the applicant must submit an affidavit or declaration by the applicants, or a statement by an attorney of record over his or her signature and registration number, must be submitted, stating that the seeds will be irrevocably and without restriction or condition released to the public upon issuance of the patent. However, the specification clearly states in paragraphs 156 through 173 (with the amendment submitted on February 28, 2002) that the seeds for the cited mutant corn plants have been submitted to the ATCC under the conditions cited by the Examiner. The inventors signed a declaration with the submission of the application and an attorney of record submitted the application and the amendment submitted on February 28, 2002, both with the signature and registration number of the attorney of record. Applicants are unaware of which section of 37 CFR 1.801-1.809 specifically requires an additional separate affidavit or declaration by the applicant or signed statement by an attorney of record over his or her signature and registration number. Applicants respectfully request that the Examiner direct the Applicants attention to the section of the CFR or MPEP that sets out such additional requirement. If no such additional requirement exists, Applicants respectfully request that the Examiner withdraw the written description rejection.

Furthermore regarding claims 30, 31, 87-90, 98-100, 127-130, 138-140, 207-210, 218-220, 347-350 and 358-360, the Examiner has asserted that the claims cover hybrid descendants of the claimed mutant, transgenic corn and that such hybrid descendants would not have the same genotypic, morphological and physiological characteristics. Claims 100, 140, 220, and 360 have been canceled. The applicants have amended the remaining claims to specify that the hybrid descendants have the claimed structural and related functional limitations of the parent, specifically the hypomethylated transgene where the expression of said transgene is at least a two-fold higher as

compared to the expression of the transgene in a non-mutant transgenic corn. One of skill in the art would recognize that breeding the claimed mutant, transgenic corn plants with other corn plants and selecting for inheritance of the claimed elements would be well within the skill of the art and therefore that the inventors were in possession of the invention as currently claimed.

In light of the above comments, cancellations and amendments, applicants respectfully request that the Examiner withdraw the rejection of claims 29-34, 81-100 121-140, 201-220, and 341-360 under 35 U.S.C. 112, first paragraph.

Claim Rejections – 35 USC § 112, first paragraph, enablement

The Examiner has rejected claim 34, 81-100, 121-140, 201-220, and 341-360 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Examiner has asserted that the specification does not describe the claimed invention in such a way as to enable one skilled in the art to make and/or use the invention. Applicants respectfully disagree with the Examiner's grounds for rejection. As discussed above, the applicants believe that they have met the deposition requirements set out in 37 CFR 1.801-1.809. Applicants respectfully request that the Examiner direct the Applicants attention to the section of the CFR or MPEP that sets out an additional requirement for a separate affidavit or declaration. If no such additional requirement exists, Applicants respectfully request that the Examiner withdraw the enablement rejection.

Claim Rejections – 35 USC § 102(a)

The Examiner has rejected claims 29 and 34 under 35 U.S.C. 102(a) as being anticipated by Chandler et al. (Plant Mol. Biol., June 2000, Vol. 43, pages 121-145).

In order to anticipate, a reference must teach all elements of a claim. Claims 29 and 34 as currently drafted are to mutant, transgenic plants. Chandler et al. do not teach transgenic plants, so the reference does not anticipate the claimed invention. Applicants respectfully request that the Examiner withdraw the rejection of claims 29 and 34 under 35 U.S.C. 102(a)

Claim Rejections – 35 USC § 103(a)

The Examiner has rejected claims 29-34 under 35 U.S.C. 103(a) as being unpatentable over Chandler et al. (Plant Mol. Biol., June 2000, Vol. 43, pages 121-145).

In order to establish a *prima facie* case of obviousness, a reference must teach or suggest all elements of a claim. Claims 29-34 as currently drafted are to mutant, transgenic plants. Chandler et al. do not teach transgenic plants, so they do not render the claimed invention obvious.

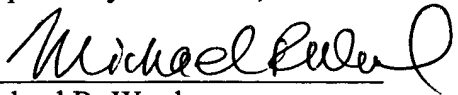
Applicants respectfully request that the Examiner withdraw the rejection of claims 29-34 under 35 U.S.C. 103(a).

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the unlikely event that the transmittal form is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing **416272061200**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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